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10/568,216	02/14/2006	Frans Johan Sarneel	19790006US1CER030018	6282

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EXAMINER	
KING, FELICIA C	

ART UNIT	PAPER NUMBER
1789	

NOTIFICATION DATE	DELIVERY MODE
10/29/2010	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

PATDOCTC@fr.com

Office Action Summary	Application No.	Applicant(s)	
	10/568,216	SARNEEL ET AL.	
	Examiner	Art Unit	
	FELICIA C. KING	1789	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *04 August 2010*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-7 and 9-31* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-7,9-31* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

This Office Action is in Response to Applicants Remarks filed 8/4/10.

Claim Rejections - 35 USC § 103

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

2. **Claims 1-4, 6, 9-15, 18-23, 25, 27, 29-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sarneel (US 2002/0037351) in view of Takashima (US 2001/0055638) and Roberts (US 4,103,038).**

Regarding Claims 1 and 2: Sarneel discloses a composition comprising 5-30% w/w starch n-alkenyl succinate, wherein starch n- alkenyl succinate is preferably starch C8 (octenyl) succinate, 15% - 40% eggs which are a protein source, and 0%-34% untreated starch [pg. 2, para 0032, 0037]. Sarneel does not disclose whey protein.

Takashima discloses adding thermocoagulation proteins, such as whey protein, to fix the cellular sponge structure formed by coagulation during heating. Thus maintaining the swollen state of the baked good and preventing bake shrinkage. "The thermocoagulation proteins used in the present invention consist of proteins containing albumin and globulin, including, for example, egg white, casein, and whey protein." [para 0026]. As seen throughout the disclosure examples, whey protein may be present from about 0-15 w/w% of the composition.

Roberts discloses an egg substitute containing 30% to 70% whey protein as its major components for the purpose of producing a low cholesterol substitute having the physical properties of eggs when used in recipes [col. 3, lines 30-51].

At the time of the invention it would have been obvious to one of ordinary skill in the that art having the teachings of Sarneel, Takashima, and Roberts before him or her to include whey

protein as Takashima, as a complete or partial substitute for the egg containing composition in Sarneel because as disclosed in Roberts substituting out the egg for whey protein helps to lower cholesterol content of food product and further whey protein helps to maintain the swollen state of the bake good and helps to prevent baking shrinkage.

Further, the substitution would have been obvious because it is well known in the art that whole eggs, containing yolk, have a high amount of cholesterol and saturated fat. The replacement of the egg portion with whey protein is known to help reduce cholesterol levels in food products. This is further strengthened by the fact that the purpose of Roberts is to produce a low cholesterol egg replacer by using a whey protein based formulation [Roberts col. 6, lines 32-34] and that Sarneel seeks to produce cholesterol-reduced baked products [Sarneel pg.3 para 0047, 0048] by using starch n-octenyl succinate and starch while reducing the amount of egg used in the recipe formulations.

Although Sarneel does not disclose starch n-octenyl succinate at 40-80% or 40% -60%, it would have been obvious to one having ordinary skill in the art at the time of the invention to adjust the amount of starch n-octenyl succinate for the replacement of a portion of eggs in a batter or dough, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272.

Although the references do not disclose starch octenylsuccinate and whey protein in the amounts as recited in the claims, it would have been obvious to vary the amounts of these ingredients depending on the desired nutrition, flavor, texture, and overall desired properties, following the guidance of Sarneel, Takashima, and Roberts, and through routine experimentation since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272.

Further regarding the formulation of starch octenylsuccinate and whey protein, Examiner points to *In re Levin 84* USPQ 232, which takes the position that "new recipes or formulas for cooking food which involve the addition or elimination of common ingredients, or for treating them in ways which differ from the former practice, do not amount to invention merely because it is not disclosed that, in the constantly developing art of preparing no one else ever did the particular thing upon which the applicant asserts his right to patent. In all such cases, there is nothing patentable unless the applicant by a proper showing further establishes a coaction or cooperative relationship between the selected ingredients which produces a new, unexpected, and useful function."

Regarding Claim 3: Sarneel discloses that the starch can be corn (maize) starch [pg. 2, para 0032].

Regarding Claim 4: Sarneel discloses that the starch n-octenyl succinate can be undextrinized, dextrinized, cooked-up, pregelatinized, stabilized or mixtures thereof [pg. 2, para 0034].

Regarding Claim 6: Sarneel discloses adding water and sugar (flavoring) [pg. 3, Ex. 2 and 3].

Regarding Claim 9: Sarneel discloses batter containing sugar and baking powder as additional ingredients [pg. 3, Ex. 2 and 3].

Regarding Claim 10: Sarneel discloses that the starch n-octenyl succinate and starch is 11% of the batter [pg. 5, Exp. 2 and 3].

Regarding Claim 12: Sarneel discloses a batter containing water, baking powder (raising agent), and sugar (sweetener) [pg. 4, Ex. 2].

Regarding Claims 13 and 27: Sarneel discloses the batter mixture containing 9.2% untreated starch [pg. 4; Ex. 4] and also discloses 0-34% untreated starch in a batter mixture [pg. 2, para 0032].

Regarding Claim 14: Sarneel discloses corn (maize) starch [pg. 2, para 0032].

Regarding Claim 15: Sarneel discloses preparing a bakery product in the form of pound cake, sponge cake, chiffon cake, cheesecake, fruit cake, layer cake and ginger bread [pg. 2, para 0012, 0037].

Regarding Claims 18 and 23: Sarneel discloses providing the batter mixture of claim 9 and also including other ingredients, baking the mixture [pg. 3, Ex. 2 and 3] and producing a baked product.

Regarding Claim 19: Sarneel discloses batter containing sugar and baking powder as additional ingredients and also discloses natural (untreated) wheat starch (C Gel 20006) [pg. 3, Ex. 2 and 3].

Regarding Claim 20: Sarneel discloses a batter containing water, baking powder (raising agent), and sugar (sweetener) [pg. 4, Ex. 2].

Regarding Claims 21 and 30: Sarneel discloses baking at 180°C [pg. 3, para 0070]. Sarneel does not disclose baking at the temperature of 160 °C (claim 30).

Although Sarneel does not disclose the baking temperature being 160 °C, it would have been obvious to one having ordinary skill in the art at the time of the invention to adjust the baking temperature to achieve a fully baked product, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272.

Regarding Claims 22 and 31: Sarneel discloses a process of baking the dough in a receptacle [pg. 3, para 0070]. Sarneel does not disclose a non-coated iron, however, it is well known

in the bakery art to bake goods in iron pans, whether coated or non-coated. One would have been motivated to do so in order for the baked product to maintain its shape and the iron receptacle will even the heat distribution of the baked product while in the oven.

Regarding Claim 25: Sarneel discloses that the starch n-octenyl succinate and starch is 11% of the batter [pg. 5, Exp. 2].

Regarding Claim 29: Sarneel discloses as discussed in claim 19 and also discloses that the starch can be natural (untreated) corn (maize) starch [pg. 2, para 0032].

3. **Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sarneel (US 2002/0037351), Takashima (US 2001/0055638), and Roberts (US 4,103,038) as applied to claim 1 above and further in view of Gisaw et al. (US 6,558,730).**

Regarding Claim 5: Sarneel discloses as discussed above. Sarneel does not disclose the starch n-octenyl succinate as derived from high amylopectin source.

Gisaw discloses using a number of different starches within its dough preparation, such as the dry mix in example 1, containing raw corn (untreated) starch and modified starches [col. 8-9]. Gisaw discloses in addition to modified starches such as waxy corn starch (which has high amylopectin) [col. 8, line 37], starch n-octenyl succinate and mixtures thereof. It is common to include starch-based materials in the dough compositions of fabricated snacks. The high amylopectin starch and/or pregelatinized starch is used to provide a dough having desired performance properties (e.g., cohesive, non-adhesive, continuously sheetable) [col. 1, lines 28-35 and col. 9, lines 10-19] and to further improve the visco-elastic properties of the dough which is important for obtaining the desired internal structure as well as the final texture of the snack [col. 4, lines 43-45].

At the time of the invention it would have been obvious to one of ordinary skill in the art having the teachings of Sarneel, Takashima, Roberts, and Gisaw, regarding the starches of the Sarneel, to use varying mixtures of starches as taught by Gisaw, including n-octenyl succinate from waxy corn starch. One would have been motivated to do so to improve the visco-elastic properties of the dough which are important for obtaining the desired internal structure as well as the final texture of the snack [Gisaw; col. 4, lines 43-45] while at the same time providing dough which produces an acceptable snack.

4. **Claims 6, 7, and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sarneel (US 2002/0037351), Takashima (US 2001/0055638), and Roberts (US 4,103,038) and in further view of Sarneel et al. "Sarneel 04" (WO 04/084640).**

Regarding Claims 6, 7, and 24: Sarneel discloses a composition comprising 5-30% w/w starch C8 (octenyl) succinate, 15% - 40% eggs which are a protein source, and 0%-34% untreated starch [pg. 2, para 0032, 0037]. Sarneel does not disclose the composition in water and optionally vitamins, flavors, edible acids, or their mixtures.

"Sarneel 04" discloses a complete mix comprising the dry mix and a liquid selected from water, savory sauce, sweet sauce, dairy-based liquids, and mixtures thereof. The dry mix further can contain in minor amounts vitamins, flavors, edible acids, and/or mixtures thereof [page 8-9]. The completed mix is based on a weight ratio of dry mix to liquid from 1:0.5 to 1:2 [page 11, para 1-4].

At the time of the invention it would have been obvious to one of ordinary skill in the art having the teachings of Sarneel, Takashima, Roberts, and "Sarneel 04" to modify the dry mix to include water, vitamins, flavors, and edible acids in order to provide the mix in a liquid form and add nutritional benefits, flavor, and preservatives which improve the palatability and shelf life of the mix.

Further regarding the ratios of dry to liquid ratio, it would have been obvious to choose a specific combination of dry composition to liquid composition would be within the ordinary ingenuity of one of ordinary skill in the art and would depend on the desired characteristics of the bakery product.

5. **Claims 11, 16, 17, 26 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sarneel (US 6,663, 909) "Sarneel 909", Takashima (US 2001/0055638), and Roberts (US 4,103,038).**

Regarding Claims 11 and 26: "Sarneel 909"discloses a composition to use in bakery products comprising untreated flour, and starch n-alkenyl succinate, and optionally starch [abstract]. The formulation of the composition consist of 20%-32%w/w untreated flour, 1-4% w/w starch n-octenyl succinate, and 0-10% w/w starch, 15-40% eggs and from 0 to 10% w/w emulsifier [col. 10, claim 17]. Sarneel does not disclose the composition comprising whey protein.

Takashima discloses adding thermocoagulation proteins, such as whey protein, to fix the cellular sponge structure formed by coagulation during heating. Thus maintaining the swollen state of the bake good and preventing bake shrinkage. "The thermocoagulation proteins used in the present invention consist of proteins containing albumin and globulin, including, for example, egg white, casein, and whey protein." [para 0026]. As seen throughout the disclosure examples, whey protein may be present from about 0-15 w/w% of the composition.

Roberts discloses an egg substitute containing 30% to 70% whey protein as its major components for the purpose of producing a low cholesterol substitute having the physical properties of eggs when used in recipes [col. 3, lines 30-51].

At the time of the invention it would have been obvious to one of ordinary skill in the that art having the teachings of "Sarneel 909", Takashima, and Roberts before him or her to include

whey protein as Takashima, as a complete or partial substitute for the egg containing composition in Sarneel because as disclosed in Roberts substituting out the egg for whey protein helps to lower cholesterol content of food product and further whey protein helps to maintain the swollen state of the bake good and helps to prevent baking shrinkage.

Although "Sarneel 909" does not disclose the flour being 10% to 20%, one having ordinary skill in the art at the time the invention was made would have considered the invention to have been obvious because the compositional proportions taught by "Sarneel 909" overlap the instantly claimed proportions and therefore are considered to establish a prima facie case of obviousness. *In re Malagari* 182 USPQ 549,553.

Although "Sarneel 909" does not disclose the flour being 10% to 15%, it would have been obvious to one having ordinary skill in the art at the time of the invention to adjust the amount of flour for the intended application, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272.

Although "Sarneel 909", Takashima, and Roberts do not disclose However, it would have been obvious to one having ordinary skill in the art at the time of the invention to adjust the amount of whey for modification of egg ingredients in dough or batter, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272.

Regarding Claims 16, 17, and 28: "Sarneel 909" discloses the formulation of the composition consist of 20%-32%w/w untreated flour, 1-4% w/w starch n-octenyl succinate, and 0-10% w/w starch, 15-40% eggs and from 0 -10% w/w emulsifier [col. 10, claim 17]. "Sarneel 909"

discloses that the starch can be natural (untreated) corn (maize) starch [pg. 2, para 0032]. Sarneel does not disclose whey protein.

Takashima discloses adding thermocoagulation proteins, such as whey protein, to fix the cellular sponge structure formed by coagulation during heating. Thus maintaining the swollen state of the bake good and preventing bake shrinkage. "The thermocoagulation proteins used in the present invention consist of proteins containing albumin and globulin, including, for example, egg white, casein, and whey protein." [para 0026]. As seen throughout the disclosure examples, whey protein may be present from about 0-15 w/w% of the composition.

Roberts discloses an egg substitute containing 30% to 70% whey protein as its major components for the purpose of producing a low cholesterol substitute having the physical properties of eggs when used in recipes [col. 3, lines 30-51].

At the time of the invention it would have been obvious to one of ordinary skill in the art having the teachings of Sarneel '909', Takashima, and Roberts to modify the formulation in "Sarneel 909" to include whey protein in place of or in addition to eggs, because it well known in the art that whole eggs containing yolk have a high amount of cholesterol and saturated fat that the replacement of the egg portion with whey protein is known to help reduce cholesterol levels in food products. This is further strengthened by the fact that the purpose of Roberts is to produce a low cholesterol egg replacer by using a whey protein based formulation [col.6, lines 32-34] and that "Sarneel 909" seeks to produce cholesterol-reduced baked products [pg. 3 para 0047, 0048] by using starch n-octenyl succinate and starch while reducing the amount of egg used in the recipe formulations.

Further, it would have been obvious to one skilled in the art to select a combination of ingredients such as starch octenylsuccinate, whey protein, and another starch to obtain different

nutritional factors, taste, texture and flavor and based upon the properties the ingredients contribute in formulating low cholesterol food products.

Although the references do not disclose starch octenylsuccinate and whey protein in the amounts as recited in the claims, it would have been obvious to vary the amounts of these ingredients depending on the desired nutrition, flavor, texture, and overall desired properties, following the guidance of Sarneel 909", Takashima, and Roberts, and through routine experimentation since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272.

Further regarding the formulation of starch octenylsuccinate and whey protein, Examiner points to *In re Levin 84* USPQ 232, which takes the position that "new recipes or formulas for cooking food which involve the addition or elimination of common ingredients, or for treating them in ways which differ from the former practice, do not amount to invention merely because it is not disclosed that, in the constantly developing art of preparing no one else ever did the particular thing upon which the applicant asserts his right to patent. In all such cases, there is nothing patentable unless the applicant by a proper showing further establishes a coaction or cooperative relationship between the selected ingredients which produces a new, unexpected, and useful function."

Double Patenting

6. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is

either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., In re Berg, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); In re Goodman, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); In re Longi, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); In re Van Ornum, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); In re Vogel, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and In re Thorington, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

7. Claims 11 and 26 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1, 4, 8 and 17 of U.S. Patent No. 6663909 B2 in view of U.S. Publication No. 2001/0055638 A1. The references and rejection are incorporated as cited in the Office action dated February 2, 2009.

Response to Arguments

8. Applicant's arguments, see pages 7-12, filed 8/4/10, with respect to the rejections of claims 1-7, and 9-31 under the references as set forth in the Office Action dated 3/4/10 have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, new grounds of rejection are made in view of the references as set forth in the above Office Action.

9. Applicant's arguments filed 8/4/10 regarding the Double Patenting rejection of claims 11 and 26 have been fully considered but they are not persuasive. Claim 17 of U.S. 6663909 discloses the limitations of claims 11 and 26 in view of the U.S. Publication No. 2001/0055638 disclosure of whey protein.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to FELICIA C. KING whose telephone number is (571)270-3733. The examiner can normally be reached on Mon- Thu 7:30 a.m.- 5:00 p.m.; Fri 7:30 a.m. - 4:00 p.m. alternate Fridays off.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/F. K./
Examiner, Art Unit 1789

/Timothy M. Speer/
Primary Examiner, Art Unit 1784